

You Get What You Pay For: User Fees and the Financing of U.S. Transportation Infrastructure

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Executive Summary

With current federal transportation authorization (known by Washington insiders and transportation advocates as MAP-21) expiring in just one year, lawmakers on Capitol Hill are holding hearings on America's infrastructure needs, where they are confronted by an inevitable shortfall between the traditional methods of filling the Highway Trust Fund's coffers and the cost to even maintain our current, inadequate, funding levels. Policymakers on both sides of the aisle recognize that the primary funding tool-- the gas tax--is inadequate to finance the improvements we need, and elected officials at all levels of government are considering new revenue streams, many of which require those who use the roads to do more to pay their own way. In this brief, we focus on "user fees" as one financing option, and consider how to establish fair prices that accurately reflect the externalities of automobile travel, and ensure that resulting revenues are used equitably. We argue that mindfully done, user fees can fairly fund capital investments even as they open a public dialogue about the nature of transportation infrastructure and encourage responsible practices that can especially benefit underinvested neighborhoods.

The brief addresses some strategies being considered in the states today, including an increased gas tax and levying general sales taxes to pay for road improvements, can be disproportionately burdensome to low-income workers. We explore how ballot measures in Arizona and Los Angeles, by defining the terms of tax increases and uses for the revenues, then putting the matter to a popular vote, try to avoid these inequities. We then examine three types of user fees that may provide greater and fairer funding for the nation's transportation infrastructure, including:

- Vehicle Miles Traveled Fees (VMT), which pilot programs have established can be less regressive than fuel taxes and would have an annual tax burden of less than \$20 per capita for 98 percent of the population;
- Congestion Fees, which the Federal Highway Administration estimated could lower the bill for sustaining our highway system from \$127 billion per year to about \$85 billion; and
- Parking Fees, which pilot programs in San Francisco and New York demonstrate can fund job-producing street improvements, support job creation in the public transit sector, and support small

local employers even as they lower greenhouse gases and other automobile-related pollutants in our cities.

Fixing our nation's roads, bridges, and transit systems is critical to propel a sound and sustainable recovery that benefits all Americans. A better transportation infrastructure could get current workers to their jobs more efficiently and safely, and its construction, maintenance, and operation could put millions more to work. A blend of public investment and equitable user fees could move our country beyond our decades'-long habit of neglecting this critical infrastructure and get our economy moving again. With commitments to stakeholder input, transparency, and accountability, fees levied on the automobile drivers who contribute to the road disrepair, congestion, and pollution from which our communities suffer can not only help finance improvements to roads and public transit, but also open public dialogues about the full cost of that use.

Introduction

This month marks the halfway point for the "Moving Ahead for Progress in the 21st Century Act" (MAP-21), better known as the federal transportation bill. As MAP-21 did not provide for higher levels of funding for transportation projects, nor any new forms of funding, over its two-year lifespan, the nation's commuters and drivers may be forgiven for feeling like rather than "moving ahead," the nation's transportation infrastructure has instead been stalling out. While the American Society of Civil Engineers slightly upgraded the country's infrastructure as a whole from a "D" in 2009 to a "D+" in 2013, the transportation grid on which we depend to move goods and services—and all of us—still just barely earned a passing grade.ⁱ

This sorry state of affairs in the nation that still boasts the world's largest economy is bad for jobs and workers in several ways. First, with disrepair so extreme, millions could be put to work rebuilding and maintaining our transportation infrastructure, and later, in the case of public transit, operating it. For example, the Transportation Equity Network found that if 20 major metropolitan areas shifted just half of their transportation funding to mass transit projects, they would see a net increase of 180,000 jobs.ⁱⁱ Second, improving the way that we move between home and work could improve the lives of millions of Americans who already have jobs; on average we spend almost a full work week hours every year delayed in traffic congestion.ⁱⁱⁱ That's time that could be used productively for family and friends, leisure, volunteerism, and other ways that would contribute significantly to families and communities. These investments would help American businesses as well, allowing them to move goods from factories to shops or shipping facilities quickly. Finally, funding shortfalls in public transit agencies are perversely leading to more layoffs even as the economy slowly recovers and demand for transit grows. A survey of 100 transit systems in 2011 revealed that many were looking at service cutbacks and layoffs^{iv}

As lawmakers in both the House of Representatives and the Senate begin holding hearings on America's infrastructure needs, they are confronted by an inevitable shortfall between the traditional methods of filling the Highway Trust Fund's coffers and the cost to even maintain our current, inadequate, funding levels. People on both sides of the aisle recognize that the traditional revenue source for road infrastructure-- the gas tax--is inadequate to fund the improvements we need, and policy makers at all levels of government are considering new revenue streams, many of which require those who use the roads to do more to pay their own way.

In this brief, we focus on some of the most discussed “user fees” and consider how to establish fair prices that accurately reflect the externalities of automobile travel, and ensure that resulting revenues are used equitably.^v We also identify and address questions related to ensuring that fees themselves are equitable. Even with the much-vaunted migration of families back into the central cities, nationwide, poverty is becoming concentrated in the suburbs, making questions of how we fund and build equitable transportation networks that blend single-occupancy automobile travel with robust public transit and alternative modes of transportation increasingly important.^{vi}

Fixing our nation’s roads, bridges, and transit systems is critical to propel a sound and sustainable recovery that benefits all Americans. A better transportation infrastructure could get current workers to their jobs more efficiently and safely, and its construction, maintenance, and operation could put millions more to work. A blend of public investment and equitable user fees could move our country beyond our decades’-long habit of neglecting this critical infrastructure and get our economy moving again.

Overview

While there is general consensus that construction and maintenance of the transportation infrastructure is a public function and most policy makers agree that vast improvements are necessary, the combination of budget constraints and ideological gridlock over spending have imposed real roadblocks to much-needed repair. The federal government remains hamstrung by insistence on focusing on short-term cost-cutting rather than long-term investment (not incidentally, the same policy that led to our infrastructure’s decrepitude in the first place). And while state budgets have rebounded somewhat since the depths of the Great Recession, they are not robust enough to return even to where we were in 2006 let alone to redress a generation of infrastructure neglect. Local governments provide nearly one-third of all funds used for surface transportation and own 77 percent of the nation’s roadway miles, but with property values still depressed and incomes stagnant, they don’t have the capital to launch improvement projects either.

A transportation system that facilitates movement around our communities, to our places of work, and in interstate commerce is not a luxury incidental to the needs and lives of everyday Americans. It is an essential public service and a critical support for a healthy economy. Given the centrality to the nation of a well-managed and soundly-constructed transportation infrastructure, the question is not *whether* we should invest

the resources needed to repair and modernize it; the only rational question is *how we will do so*.

Mindfully done, user fees can fairly fund capital investments even as they open a public dialogue about the nature of transportation infrastructure and encourage responsible practices that can especially benefit underinvested neighborhoods.

Arguably, since virtually all of us depend on transportation in one way or another, using our relatively equitable income tax revenues to fund infrastructure maintenance and upgrades would be the most just way to finance our transportation network. It just isn’t the most politically feasible way; nor, given the ever shifting set of priorities in Washington, D.C., is it necessarily the most sustainable way. And in the

current political climate, the possibility of redistributing general funds to finance fair transportation seems slim. Other researchers are exploring additional innovative financing possibilities, including short-term federal

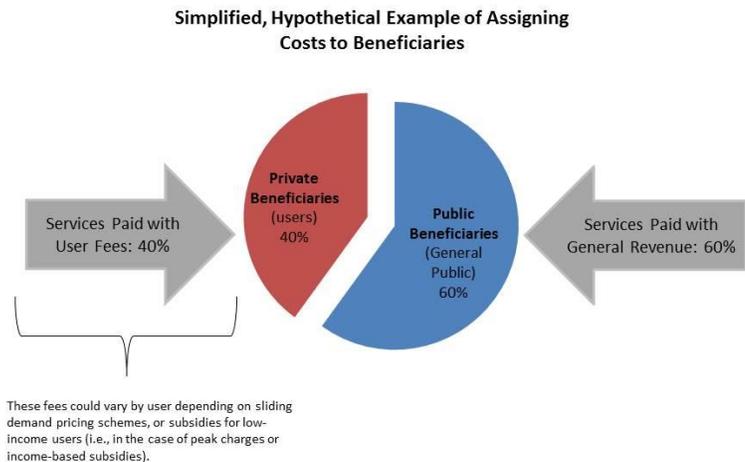
loans like “grant anticipation revenue vehicles” (GARVEEs) and “Buy America Bonds” (BABs).^{vii} Our focus in this brief is on user fees, which, mindfully done, can fairly fund capital investments even as they open a public dialogue about the nature of transportation infrastructure and encourage responsible practices that can especially benefit underinvested neighborhoods.

The Critique of User Fees

Most of us are actually already familiar with user fees. When we receive bills for water and electricity we are charged for the amount of the resource we have used, often with a premium cost levied on use during peak hours. When we ride public transit that charges a fee based on distance traveled, or pay a toll to drive on a thruway, we are also paying user fees. In principle, even the gasoline tax is a user fee in that it is supposed to charge drivers for their use of the roads, although in practice this tax does not pay for all of the true costs of driving and increasing fuel efficient cars have broken the link between gallons of gasoline and wear and tear on the roads.

The term “user fee” is often associated with a kind of preferential fee that pulls resources out of the public realm and buys better service for the wealthy. In California, Colorado, Florida, Georgia, Minnesota, Texas, Utah, Washington, and Virginia, High Occupancy Toll (HOT) lanes, or “Lexus lanes” as detractors call them, set aside special premium traffic lanes for those willing to pay for them even as they remove travelling space for others, causing long lines at the non-premium toll booths.^{viii} In other locations, user fees are associated with the wholesale leasing of toll roads to private companies that then determine the cost of using the resource for all users. For instance, the Spanish company, Ferrovial (mostly through its subsidiary, Cintra^{ix}), now holds such leases for toll roads in Texas, Indiana, Illinois, and Virginia,^x while some policy makers in Wisconsin are proposing to sell publicly-owned power assets to pay for construction on roads.^{xi} In these cases, the private contractor may have power over decisions—toll rates, whether improvements will be made to surrounding assets, or if mass transit will be built nearby—that affect the public profoundly and that usually would be subject to transparency, oversight, and disclosure if made by public officials.^{xii} These experiences can result in assumptions that user fees are inherently inequitable, unfair, and in the long term damaging to democracy and public assets.

However, there are other types of familiar user fees that do not carry these same negative connotations, including tolls on public thruways, parks and recreation fees, solid waste charges, metered water bills, and ticket prices on public transit. In these cases, most users recognize that their fees are offsetting the costs of their use, but also that the resource is a public good and not wholly dependent on their fees to function, drawing in addition from other, public, funding sources. This blending is partially in the



(Chart adapted from US Government Accountability Office, “Federal User Fees: A Design Guide,” May 2008.)

interest of keeping the resource available to all regardless of income, and is in part recognition of the ongoing public benefit of the efficient movement of goods and the public health benefit of clean water and green space.

In these cases, combining general revenue sources with user fees can be an equitable way to ask all community members to pay for public resources. To the extent that the provision of the resource meets the fundamental responsibility of the public sector to provide at least a minimum level of service to the community overall, general revenues should contribute to its upkeep. And to the extent that selected users take advantage of that resource and use it above and beyond that level, they contribute fees commensurate with that value.

In fact, user fees can themselves open an important dialogue between policy makers and constituents and heighten understanding of the real cost of assets, the most efficient ways to use them, and the importance of these assets to the quality of life for the whole community. Voters are regularly offered “take it or leave it” bond resolutions in which policy makers ask them to fund projects without engaging in a dialogue about how to value those projects. User fees could help us move from public discussions about shortages—for instance, demands to add additional lanes to clogged freeways—to instead help constituents understand the heretofore externalized costs of their inefficient use of the resource. These dialogues can help policy makers consider construction and maintenance plans that reflect the real patterns of use by consumers and are thus more efficient.

Gas Tax vs. Vehicle Miles Travelled (VMT) Fees

The Gas Tax: Inadequate and Unfair

In 1932, faced with a federal budget deficit of \$2.1 billion dollars, President Herbert Hoover instituted the federal gasoline tax. It was subsequently increased to fund national defense during World War II, and in 1956 was finally dedicated to financing a new Highway Trust Fund to pay for the construction of the interstate system (later expanded to also fund mass transit and some Superfund cleanups). As President Ronald Reagan famously stated when he raised the gas tax in 1982, because the majority of the gas tax revenues are used to

Making User Fees Fair

- Fees should reflect the actual cost of using the resource,
- There should be non-fee options available for those who are willing to sacrifice efficiency to avoid the charges,
- There should be clear connections between the revenue generated by the fee and improvements to the resource,
- Public education must explain the benefits of the fee to the resource, but also to the overall quality of life of the community,
- Some of the revenue should be dedicated to program goals that increase equity, such as making access affordable for low-income community members or creating quality jobs.

build and maintain the highways and bridges on which those drivers use the gas, it is really a “user’s fee” because “the tax that funds a service is levied on those who benefit from the service.”^{xiii}

The problem is that the gas tax is not a very well designed user fee. In part this is because it is no longer wholly connected with the resource being used. While some decried apportioning part of gas tax revenues to public transit, most understood “transportation” as encompassing a network of arterials, highways, and alternative transit modes needed to move goods and people around the country. But in the 1990s, Presidents George H.W. Bush and Bill Clinton both returned to committing part of the gas tax revenues again to its initial purpose: deficit reduction.

Even without these diversions, the gas tax is no longer adequate to finance the country’s transportation network. Since the Congress last raised the gas tax almost twenty years ago, it has lost approximately one-third of its buying power.^{xiv} This problem seems destined to grow as some consumers buy ever more efficient vehicles that require less gas—and therefore less gas tax—and get more use out of the roads than they pay for. In the last 30 years, drivers have doubled their use of the nation’s roads, but their fuel consumption has gone up only 50 percent.^{xv}

But the gas tax is also an ineffective user fee because it is regressive. Because they are least able to afford efficient vehicles or adapt to fuel price volatility, low-income gasoline consumers can feel gas taxes keenly. And low-income workers are becoming increasingly dependent on automobiles as the public transportation network fails to keep up with changing residential and work geographies. According to the Brookings Institution, by 2006 nearly half of all workers in the country’s largest metropolitan areas had jobs more than 10 miles away from city centers.^{xvi} (In fact, our underinvestment in public transit may actually force low-income workers to invest in automobiles they can’t really afford just to get access to jobs, leading some analysts to call for subsidized car ownership.^{xvii})

Funding Transportation with General Sales Taxes: Potential for Unfairness

Even more vexing, because the gas tax on its own can’t fund road infrastructure, it has to be complemented by other forms of public funding. With the increasing devolution of transportation funding from federal and state governments to local ones, more policymakers are turning to local option transportation taxes like local fuel taxes, vehicle taxes, vehicle registration fees, and general sales taxes to shoulder the burden.^{xviii} In part as a response to taxpayer revolts against property taxes, policy makers have increasingly relied on sales taxes to add to public coffers, most often with the backing of voters. Sales taxes are often perceived as “fair” since they are horizontal and everyone pays them and to some extent they are discretionary (inasmuch as the underlying purchases are discretionary). They are seen as less onerous than property taxes or other types of user fees because they are paid incrementally over time rather than in one lump sum. However, sales taxes are often levied on items that are clearly not discretionary, like clothing or household goods, and in some states are even levied on groceries.

In some places, these taxes are implemented by popular vote. Like Los Angeles County voters who supported a sales tax increase to fund public transit, bus and train service, subsidized fares, and freeway improvements, in 2004 voters in Maricopa County, Arizona, approved an increase in sales taxes on retail sales, contracting, utilities, property rentals, and restaurant receipts, with one-third of the funds going to public transit and two-thirds to highway and arterial road improvements.^{xix} These ballot measures can be popular with voters for a

variety of reasons: (1) because they address taxing authority at the local or county level, voters perceive these revenues as going to fund projects in their own communities; (2) most often, these ballot measures include a sunset date that voters see as a chance to assess progress and decide if the projects live up to their expectations; (3) as was the case in both Los Angeles and Maricopa County, these measures often list the specific projects they will fund and in some states a detailed plan is required before the measure can be put to a vote; and (4) the resulting revenues stay within the taxing authority's boundaries, giving voters confidence that the revenue will not be spent in other jurisdictions.^{xx}

But where these policies were not put to a vote, people who put their transportation dollars into one form of transit (buses, walking, or bicycling, for example) have their non-discretionary sales tax dollars going to fund other forms of transit that they do not use (though, of course, the network of roads and rails were critical to bringing products to them, and so they do see some benefit from keeping them in good repair). A study in Northern California found that 12 percent of low-income workers take the bus to work, with 17 percent carpooling and 7 percent walking; assuming this is at all indicative of general national trends, more than one-third of low-income workers are already engaging in behaviors that minimize wear and tear on the roads and lower congestion levels for other users.^{xxi} Another study found that 33 percent of low-income African Americans don't have access to automobiles at all, along with 25 percent of low-income Latinos, and 12.1

Learning from Los Angeles County's "Measure R": Transit Dedicated Sales Tax

In 2008, Los Angeles County voters approved a ballot measure raising sales taxes by one-half of a cent for thirty years to pay for transit and freeway improvements. Advocates claimed the investment would improve mobility in the region, diminish green-house gases, and create more than 270,000 new construction jobs. They enumerated benefits including subsidized fees for seniors, students, and the disabled; expanded bus, train, and subway services; improved traffic flows on freeways; and public transit to the airport. A coalition of organized labor and business, a massive public relations campaign, and an official political "Vote Yes" campaign mobilized in support of the measure and won the vote. Seven months later, even as the Great Recession hit with full force, polls showed that the measure remained popular.

But when Mayor Villaraigosa announced a desire to extend the sales tax increase for another 30 years in 2012, the resulting ballot measure (Measure J) failed to win a two-thirds majority. The measure was opposed by advocates for low-income bus riders and by wealthy residents of Beverly Hills concerned about a train line in their community. Both organizations expressed frustration in being shut out from transit planning. Others were uncomfortable with a sunset date so far in the future, and public discussions demonstrated voter uncertainty about how the money would be spent and ambivalence about some freeway expansions.

Some speculate that the proposed extension simply came before residents saw concrete benefits from Measure R. Others suggest that the transit agency's difficulty in redressing freeway congestion led to reluctance to give them a perceived "blank check." Nevertheless, Measure J did win nearly two-thirds of the vote, indicating that even in a challenging economy; voters understand the need to contribute to infrastructure spending and with Measure R in place will continue to do so in Los Angeles.

percent of low-income whites.^{xxii} Moreover, studies have shown that sales-tax transportation expenditures usually go to new construction rather than the most cost-effective maintenance of currently used roads, meaning that current bus lines or smaller local roads do not benefit as much from these measures as new highways connecting suburbs to central cities.^{xxiii} Unless the sales tax revenues are also funding these alternative modes of transit, low-income workers are subsidizing the commutes of their higher-paid counterparts.

If a community is given specific information about the intended use of its sales tax dollars, and based on this information and the value they place on the infrastructure in question they approve the levy, a dedicated tax ratified by a popular vote can be a viable funding mechanism. However, even under these circumstances the burden of the tax is likely to fall disproportionately on poorer residents with little discretion in their spending and potentially beyond their use of the resource. Policymakers need to be mindful of this likelihood and offset it as much as possible.

Vehicle Miles Traveled Fees: A Path to More Equitable and Efficient Use of America's Roadways

Automobile and truck traffic imposes costs on communities beyond just wear and tear on the roads. Noise, pollution and greenhouse gas emissions, dependence on foreign oil, and accidents affect surrounding communities. Researchers have tried to establish the cost of these externalities, finding that while congestion costs between 0.88 and 7.5 cents per mile (in 2006 dollars), noise costs as much as 3.5 cents, air pollution as much as 6.7 cents, and accidents as much as 14.4 cents.^{xxiv} The gas tax was designed only to pay for wear and tear on the roads, not these ancillary externalized costs of automobile travel and congestion. Instead, residents of surrounding neighborhoods pay those costs through increased health problems, increased stress, and decreased mobility. As the Congressional Budget Office has pointed out, "Most of the costs of using a highway, including pavement damage, congestions, accidents, and noise are tied more closely to the number of miles traveled than to the amount of fuel consumed."^{xxv}

A "vehicle miles traveled" (VMT) fee may thus be a much fairer and more responsive means of fixing user fees that apportion costs in relation to actual use. The VMT is not a wholly new idea—indeed many states used a similar concept to fund road improvements before the advent of the gas tax, and the idea lives on in the tolls charged to travel some of the nation's thruways. But it is a departure from our current funding mechanisms and raises its own questions about fairness and feasibility.

The Government Accountability Office's report on mileage-based user fees starts on an unambiguous note: "[S]uch fees can lead to more equitable and efficient use of roadways by charging drivers based on their actual road use and by providing pricing incentives to reduce road use."^{xxvi} Other studies have indicated that questions of equity and a VMT are somewhat more nuanced, but that on the whole such a fee can be designed to have a minimal impact on low-income drivers (especially if combined with congestion pricing, which we discuss in more length below). Researchers analyzed Oregon's pilot program in which drivers are charged 1.2 cents per flat mile and determined that if such a fee were to replace the current 24-cent per gallon gas tax, low-income families would be marginally hurt by the VMT in the short run but that in the long term, since gasoline price volatility would no longer come into the equation, these families might see virtually no negative impact.^{xxvii} Further, the researchers note that their model assumes that the new VMT does not change driving habits and thus probably finds greater regressivity than would actually occur as families began to bundle trips

(for instance, combine errands) or use other forms of transportation for short trips (like bicycling or walking). Indeed, other researchers have found that consumers are more responsive to price changes in transportation in the long-term than has previously been assumed, with increased likelihood of purchasing efficient vehicles or deciding to live close to public transit.^{xxviii} Other researchers analyzing a VMT of less than one cent have concluded that the fee would be less regressive than fuel taxes and that nationally the annual tax burden for

98 percent of the population would increase by less than \$20 per capita.^{xxix}

Steps for Implementing Variable Tolling In Your State from SmartGrowth America:

1. Determine if your state tolling commission has the authority to implement a new pricing plan, or if it needs voter approval.
2. Conduct analysis and feasibility studies to establish optimal fee levels and estimate their effect on traffic volume.
3. Engage and educate the public so that they understand how the variable system will work, but more importantly how the revenues will be used and how it will address their transportation needs.
4. Collect traffic volume data after variable pricing is in place and report it publicly. Determine which performance measures are most important to your constituents (time savings, emissions reduction, etc.) and track them.

(Adapted from SmartGrowth America's report, *The Innovative DOT*, Focus Area 3: Pricing.)

Many oppose a VMT based on privacy concerns. Because the most efficient systems would use GPS technology to verify the number of miles a driver traveled, opponents believe that users would balk at perceived government tracking of individuals' specific routes. (Advocates note that the system could be programmed to calculate only number of miles, not location or destination information. The increasing acceptance of electronic tolling systems also points to a willingness of travelers to trade some level of privacy for increased efficiency.) Others worry that by removing the financial incentive for fuel efficiency that the gas tax offers, progress in lowering greenhouse gas emissions will slow. In Europe, where commitments to address climate change are generally stronger than in the United States, this latter concern has been addressed by charging more per mile for higher polluting vehicles in each weight class.

During the 112th Congress, Representative Earl Blumenauer introduced a bill to finance a national study of a VMT proposal, but it was not put to a vote. The last short-term renewal of the federal transportation authorization did not include it, and because the recent continuing resolution passed by the Senate maintained current spending levels, it did not fund a VMT study either. Those who would like to see national data on the feasibility of this system will have to wait until 2014 when Congress again takes up transportation authorization to make their case. But in the meantime, states in the Pacific Northwest are conducting their own trials of a VMT system

and a University of Iowa study will incorporate data from voluntary programs in California, Florida, Illinois, Kansas, Maine, Maryland, Montana, New Mexico, North Carolina and Texas.^{xxx}

Congestion Fees: Offsetting the Costs of Traffic Bottlenecks

Most Americans, whether they travel in their own automobile or by bus, are all too familiar with the problems of traffic congestion. Traffic congestion contributes significantly to the externalities we previously noted—among them pollution and accidents—but for most drivers the costliest externality is the increased time they must factor into daily transportation plans. This cost is manifest both in repeated delays during which commuters cannot meet family or work obligations, and a phenomenon some call “just in case” time wherein commuters leave ever earlier for their destination, cutting into leisure or sleep time. These time issues are accompanied by increased stress and exposure to pollutants, with deadly and exorbitant costs: Harvard researchers estimated that in 2005, 3,000 people died prematurely as a result of traffic congestion, with an estimated cost to their families and communities of nearly \$23 billion (in 2005 dollars).^{xxxix}

One solution to limiting expensive and frustrating traffic delays is congestion pricing, in which drivers are offered different fees to travel during various times of the day and using their own cost-benefit analysis, choose their travel time accordingly. Congestion fees can also encourage users to adapt their travel behaviors by offering financial incentives to use public transit, shift discretionary trips to off-peak hours, or to carpool. The revenues raised through variable tolling prices could both fund maintenance and operations of our roadways, and lessen the need for increased carrying capacity on them by evening out current levels of use throughout the day. In fact, in 2011, the Federal Highway Administration estimated that “widespread” use of congestion pricing would bring the amount needed to sustain our highway system down from \$127 billion per year to about \$85 billion.^{xxxix}

Variable tolling is not an unfamiliar concept to most Americans. We are used to being charged for utilities like electric power and water based on both our total use and our use of “peak” and “off-peak” hours. While most experts agree that a similar system for staggered tolling on our roadways is the only viable way to address traffic congestion, politicians “see congestion pricing as a complicated new charge for something that has always been free.”^{xxxix} In some ways, congestion pricing seems eminently equitable: most people pay some toll with the level varying depending on overall demand for the road at any given time, there is freer flow of traffic, and revenues can pay for public transit services so that everyone benefits.

However, the realities of work schedules and family obligations could make shifting hours of use more difficult in a transportation context: while we may have some discretion over when we do our laundry, many of us do not have similar discretion over when we’ll arrive at work. Indeed, a recent GAO report on congestion pricing notes that most studies of existing variable tolling schemes do not take equity questions into account, but that a study of traffic in New York City bridges and tunnels found that many users could not change their schedules to take advantage of lower off-peak tolls.^{xxxix} Furthermore, to the extent that low-income workers’ time is less valuable than the cost of the tolls—meaning that their personal calculus would argue for using slower but untolled roads—or that their communities contain untolled options that will suddenly be swamped by drivers avoiding congestion toll costs, they can suffer from congestion pricing unless the resulting revenue explicitly goes to improve public transit and other conditions in their communities.

Studies of existing congestion pricing systems in Europe and Japan find that generally, congestion pricing has net benefits to the whole community so long as commuters have access to public transit and “slow modes” of travel and so long as the resulting revenues are split between both roadway and public transit investments.^{xxxix}

In fact, while Stockholm’s variable tolling cordon system costs roughly £25 per year, in 2008 it raised approximately £85 in public revenue and saved consumers another £13 in saved time and fuel costs from reduced idling on congested roads.^{xxxvi} In other words, while the users of the tolled roads see personal material benefit from the lowered levels of congestion, the broader community that benefits from the investment of the resulting revenue benefited far more greatly. It is this community-leaning break-down of costs and benefits that makes congestion-tolling so appealing to economists, urban planners, transportation experts, and policy makers and also so difficult for roadway users to embrace.^{xxxvii}

There are some variable tolling plans in place in the United States from which we can learn, too. In Washington State, the Department of Transportation has initiated variable tolling on some of its bridges specifically to finance bridge replacement projects. New tolls on the “520 Floating Bridge,” between Seattle and its Eastern suburbs, are projected to raise approximately one-fourth of the funds needed to build an expanded and safer bridge. Assessments of traffic flow after the first year of operation showed that the tolls had raised \$50 million in gross revenue and traffic was at 70 percent of pre-toll levels. Public transit on the bridge (which is not tolled) had risen by 25 percent and vanpool use had risen by 39 percent.^{xxxviii} The tolling scheme has enough public support that a 2011 ballot measure to limit use of toll revenue and outlaw variable rates was defeated, with 53.21% voting against it.

Not all plans to implement congestion pricing are so successful, however. A 2007 proposal to initiate staggered tolling in New York City failed to pass in the state legislature despite polls that showed more than two-thirds of respondents supported the plan so long as it also funded public transit. The plan was initially proposed by a coalition of alternative transportation advocates and business leaders concerned about the effects of congestion and there was good public involvement in developing the plan. Nevertheless, public education efforts failed to convince automobile users in key districts that the plan was in their self-interest and a general lack of faith in the city’s transit agency made many leery of giving it a blank check.^{xxxix}

Nobody is only an automobile driver, but constituents who think of themselves that way can defeat congestion pricing schemes that could fund needed infrastructure improvements and the health, safety, and physical mobility of our communities. Initial resistance to these plans should be met with specific data about how the plan will benefit drivers directly in saved time and fuel, but also with measures of quality of life improvements for the community as a whole. Plans for how the revenue will be used must be clear and specific, and tolling authorities must be willing to continue collecting data once the plan is in place and measure them again the stated goals of the program.

Parking Fees: Revenue for Public Transit, Even When You’re Sitting Still

According to the Federal Transit Administration, fare boxes only pay for about 40 percent of the operating costs for public transit systems. Using other streams of revenue to fund transit not only helps large numbers of local residents in daily commutes, but also makes a statement about a community’s commitment to economic growth, stability, fairness, and quality of life. One source that several metropolitan transit authorities are pursuing is the cost cars impose once they have arrived at their destination. Parking fees can both create an incentive for more commuters to opt for public transit—thus raising the fares the system collects—and subsidize those who choose not to bring their cars into congested areas. Free or low-cost on-street parking only benefits the first people to get there in the morning. Others circle the block endlessly, or

don't patronize shops and businesses at all. Central city residents, on the other hand, suffer the negative consequences in the form of constricted parking near their homes and increased air pollution. In fact, in the 1970s New York, San Francisco, Portland and Boston were all forced by lawsuits brought under the Clean Air Act to cap parking in their central business districts.

In study after study conducted throughout the twentieth century, researchers found that on average about one-third of cars in downtown traffic were searching for parking. A 2008 study of traffic in part of New York City found that over the course of a year, underpriced parking in a 15-block area created 366,000 excess vehicle miles and 325 tons of carbon dioxide.^{xli} Setting a market rate for parking can diminish traffic congestion, make bus service more desirable and efficient, increase accessibility to businesses for customers, make urban neighborhoods more healthy and attractive, and make automobile commuters pay for some of the external costs of their behavior to subsidize those who use public transit instead. Several studies using transportation diaries have revealed that higher priced parking comes with a number of benefits: higher rates of public transit use (and by extension, higher revenues from transit fares), increased revenue from the meters, and decreased air pollution.^{xlii} In Portland, Oregon, bus ridership to the sports stadiums went from 10 percent of trips to 33 percent after parking meters went into effect.^{xliii} In Boulder, Colorado, the relationship is explicit: nearly 6,000 workers in the downtown business district receive free passes for public transit funded by parking meter revenues.^{xliiii}

In San Francisco, municipal transportation officials are partnering with the US DOT to develop a program called *SFpark* to collect block-by-block data to determine the demand for parking in their city and set meter rates designed to ensure an 85 percent occupancy rate throughout the day. In some neighborhoods without meters, even residents could not find street parking. "Everyone knows you can park free all day, all week—you can leave your car here and go to the airport," noted one parking expert.^{xliiv} Using smart phone technologies, drivers can learn what the going rate is for parking in the pilot area and make their parking choices by weighing the cost per hour with their willingness to walk from outside of particularly congested areas. The program was launched in 2008, and includes just over 6,000 curbside parking spaces (approximately 25 percent of available on-street parking in the city) and nearly 12,000 off-street spots managed by the City.^{xliiv} New rates were set in mid-2011, and since then have been incrementally readjusted ten times, going up on some blocks and down on others in response to demand.^{xlivi}

Initial analysis of the data revealed that parking revenues increased the first year by 20 percent (although parking violation fees decreased by more than 30 percent).^{xliivii} The transportation authority also found that drivers continued to use high-demand spaces even once the price approached \$4 per hour, although the rate of turnover may be higher. This has been the case with a similar program in New York City called "Park Smart." Designed to address parking shortages in the Park Slope neighborhood of Brooklyn, the municipal DOT found that after one year of variable parking prices, the duration of stays dropped by between 17 and 23 percent and traffic volumes had dropped by an average of 7 percent.^{xliiviii}

Some parking policy experts recommend that revenues from smart parking systems be used only in the areas where the meters are located so that drivers can see the benefit of their fees. Using the revenues for street improvements, pocket parks, or other measures to improve the surrounding community could, in and of themselves, increase shopping traffic and thus indirectly boost jobs; and if more people choose to use buses or trains to save the cost of parking, transit fare revenues will increase even without a share of the parking

revenues. Other communities, especially those with shared commitments to greenhouse gas and emissions reductions, may be able to more directly connect these revenues with transit subsidies since residents may be more supportive of what is essentially a carbon tax on automotive commuters.

Conclusion

Even as governments explore various infrastructure investment models to take advantage of low borrowing costs, we need to reevaluate whether twentieth-century transportation funding mechanisms like the gas tax can help us get to the twenty-first century network we need to engender and sustain a robust economic recovery. As state and local governments are asked to carry an ever-increasing level of infrastructure funding, many are looking to a more robust menu of policies to accurately value the cost of our roads and bridges and ask those who sue them to pay a fair share. As with all fee and tax structures, there are some models that exacerbate income and wealth inequality and some that explicitly seek to redress those disparities. With commitments to stakeholder input, transparency, and accountability, fees levied on the automobile drivers who contribute to the road disrepair, congestion, and pollution from which our communities suffer can not only help finance improvements to roads and public transit, but also open public dialogues about the full cost of that use.

ENDNOTES

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ⁱⁱⁱ Texas A&M Transportation Institute, "[2012 Urban Mobility Report](#)," December 2012.

^{iv} American Public Transportation Association, "[Impacts of the Recession on Public Transportation Agencies, 2011 Update](#)," August 2011.

^v Over the past two years, the National Employment Law Center (NELP) has addressed the ongoing crisis of unemployment and the need for policymakers to enact serious and ambitious policies to promote job creation to put millions of Americans back to work. In addition to outlining an overall agenda designed to trigger a robust economic recovery while protecting critical safety net programs, [Filling the Good Jobs Deficit: An Economic Recovery Agenda for our States and Cities](#), we highlighted innovative municipal policies to modernize water, waste, and energy systems while creating quality new jobs ([City Systems: Building Blocks for Achieving Sustainability and Creating Good Jobs](#)) and described how policy makers and private investors can achieve greenhouse gas reductions, financial return, and the creation of good jobs through energy efficiency retrofit programs ([Rebuilding Out Way to a Sustainable Recovery: Making Commercial Building Retrofit Jobs into Quality Jobs for Our Communities](#)). An earlier NELP brief, [State Infrastructure Banks: An Old Idea Yields New Opportunities for Job Creation](#), examined one strategy states, and some cities, are pursuing to fund particular kinds of physical infrastructure improvements.

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About NELP

The National Employment Law Project is a non-partisan, not-for-profit organization that conducts research and advocates on issues affecting low-wage and unemployed workers. In partnership with grassroots and national allies, NELP promotes policies to create good jobs, enforce hard-won workplace rights, and help unemployed workers regain their economic footing. For more about NELP, please visit www.nelp.org.